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DOUGLAS R. SCHNABEL			EXAMINER	
316 HART STREET			LE, THAO X	
ESSEXVILLE, MI 48732				
			ART UNIT	PAPER NUMBER
			2814	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/823,099

Applicant(s)

AISENBREY ET AL.

Examiner

Thao X. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 13 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 13 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Recitation "further comprising metal power" and "further comprising non-metal powder" in claim 3 and 8, respectively, is unclear because it fails to identify what element or limitation is further comprising, the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

The "micron conductive fiber" is being interpreted as "comprises metal powder" or "non-metal powder" for the examination purpose.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-10, 12-13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5903239 to Takahashi et al. in view of US 6165386 to Endo et al.

Regarding claim 1, Takahashi discloses an integrated circuit (IC) device in fig. 8 comprising: an integrated circuit die 52 fixably attached to a substrate 17 and electrically connected to a metal trace 26 on said substrate 17, an encapsulating layer 18 overlying said IC die 52 and substrate; and an antenna structure 19 overlying said encapsulating layer 18 and directly contacting said metal trace 26 through an opening 20 in said encapsulating layer 12.

But, Takahashi does not disclose the IC device wherein the antenna comprising a conductive loaded resin based material comprising micron conductive fiber in a resin host.

However, Endo discloses an antenna 21, col. 36 line 1, comprising a conductive loaded resin based material comprising micron conductive material in a resin host, col. 6 lines 63-65. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the antenna material teaching of Endo to replace the antenna 19 of Takahashi, because it would have

created a conductive paste to form an antenna-shaped for radio frequency identification medium, see abstract.

Regarding claims 2-4, Takahashi does not disclose the device wherein the ratio, by weight, of said micron conductive fiber to said resin host between about 0.20 and about 0.40, wherein micron conductive fiber comprise metal powder, wherein the metal powder is nickel, copper, or silver.

However, Endo discloses an antenna 21 comprises wherein the ratio, by weight, of conductive materials to said resin host between about 0.20 and about 0.40, col. 6 lines 64-65, wherein conductive materials comprise metal powder, wherein the metal powder is nickel, copper, or silver, col. 5 line 60, for the same reason as discussed in claim 1.

Regarding claims 5-6, Takahashi does not disclose the device wherein said metal powder a non-conductive material with metal plating, wherein said metal nickel, copper, silver, or alloys thereof.

However, Endo discloses the metal powder comprises a non-conductive material with metal plating, col. 7 line 2, wherein said metal nickel, copper, silver, or alloys thereof, col. 5 line 60, for the same reason as discussed in claim 1.

Regarding claim 7-10, 12-14, Takahashi does not disclose the device wherein metal powder comprises a diameter of between about 3 micron and about 12 micron, wherein materials comprise non-metal powder conductive, wherein said non-metal powder is carbon, graphite, or an amine-based material, wherein conductive materials comprise metal powder a combination of metal powder and non-metal powder, wherein

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materials comprise micron conductive fiber, wherein said micron conductive fiber is nickel plated carbon fiber, stainless steel fiber, copper fiber, silver fiber or combinations thereof.

However, Endo discloses the device wherein metal powder comprises a diameter of between about 3 micron and about 12 micron, col. 6 lines 7 and 10, wherein materials comprise non-metal powder conductive, wherein said non-metal powder is carbon, graphite, or an amine-based material, wherein conductive materials comprise metal powder a combination of metal powder and non-metal powder, col. 7 line 2, wherein materials comprise micron conductive fiber, wherein said micron conductive fiber is nickel plated carbon fiber, stainless steel fiber, copper fiber, silver fiber or combinations thereof, col. 34 line 27, for the same reason as discussed in claim 1.

Regarding claim 18, Takahashi discloses the device said encapsulating layer 18 comprises a dielectric material. But Takahashi does not disclose the encapsulating 18 comprising a resin-based material. However, such resin-base encapsulating material (dielectric material) is well known in the art, see Brady (6518885) fig. 1 element 25 or Miller (6200829) fig. 1 elements 56, 58, 60, and 70.

Response to Arguments

7. Applicant's arguments filed 09 April 2007 have been fully considered but they are not persuasive.

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a. The Applicant argues that Endo does not disclose the micron conductive fiber. Apparently, the Applicant is claiming a different species of conductive powers by first claiming micron conductive powder then second claiming micron conductive fiber. The Examiner respectfully disagrees because Endo discloses the conductive power having micron particle size and flaky structure, col. 6 lines 1-10. Thus, it would read on the micron conductive fiber. Furthermore, Endo clearly discloses the micron power as discussed in the above claims and in the previous Office Action, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named. Ex parte A, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990), MPEP 2131.02.

b. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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THAO X. LE
PRIMARY PATENT EXAMINER